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Characteristics of Employment, Australia methodology

Reference period August 2020

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Introduction

The Characteristics of Employment (COE) survey was conducted throughout Australia in August 2020 as a supplement to the monthly Labour Force Survey (LFS). Respondents to the LFS who fell within the scope of the supplementary survey were asked further questions.

Additional information about survey design, scope, coverage and population benchmarks relevant to the monthly LFS, which also applies to supplementary surveys, can be found in [Labour Force, Australia, Methodology \(/methodologies/labour-force-australia-methodology/aug-2020\)](#).

Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling the estimates, are presented in [Labour Statistics: Concepts, Sources and Methods \(https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6102.0.55.001~Feb%202018~Main%20Features~Overview%20of%20Labour%20Statistics~1\)](https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6102.0.55.001~Feb%202018~Main%20Features~Overview%20of%20Labour%20Statistics~1).

Scope and coverage

The scope of the LFS is the civilian population aged 15 years and over, excluding

- Members of the permanent defence forces
- Certain diplomatic personnel of overseas governments
- Overseas residents in Australia
- Members of non-Australian defence forces (and their dependants) stationed in Australia.

Students at boarding schools, patients in hospitals, residents of homes (e.g. retirement homes, homes for people with disabilities), and inmates of prisons are excluded from all supplementary surveys.

This supplementary survey was conducted in both urban and rural areas in all states and territories, but excluded people living in Aboriginal and Torres Strait Islander communities.

In addition to those already excluded from the LFS, contributing family workers, people not in the labour force and unemployed people were also excluded.

In the LFS, coverage rules are applied, which aim to ensure that each person is associated with only one dwelling, and hence has only one chance of selection in the survey.

See [Labour Force, Australia methodology \(/methodologies/labour-force-australia-methodology/aug-2020\)](#) for more details.

Collection method

Supplementary surveys are not conducted on the full LFS sample, since August 1994 the sample for supplementary surveys has been restricted to no more than seven-eighths of the LFS sample. This survey is based on the new sample introduced into LFS in July 2018. The new sample design has adopted the use of the Address Register as the sampling frame for unit selection, and the sampling fractions for selection probabilities within each state have been updated to reflect the most recent population distribution based on results from the 2016 Census of Population and Housing. As with each regular sample design, the impacts on the data are expected to be minimal. For more information, see the [Information Paper:](#)

[Labour Force Survey Sample Design, Jul 2018 \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6269.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6269.0).

Information is obtained either by trained interviewers or through self-completion online. The interviews are generally conducted during the two weeks beginning on the Sunday between the 5th and 11th of August. The information obtained relates to the week before the interview (i.e. the reference week). Occasionally, circumstances that present significant operational difficulties for survey collection can result in a change to the normal pattern for the start of interviewing.

COE questionnaire

[↓ Download XLSX](#)
[73.32 KB]

Weighting and estimation

Population benchmarks

The Labour Force Survey estimates and estimates from the supplementary surveys such as Characteristics of Employment are calculated in such a way as to sum to the independent estimates of the civilian population aged 15 years and over (population benchmarks). These population benchmarks are updated quarterly based on Estimated Resident Population (ERP) data. See [Labour Force, Australia methodology \(https://author.absweb.aws.abs.gov.au/methodologies/labour-force-australia-methodology/aug-2020\)](https://author.absweb.aws.abs.gov.au/methodologies/labour-force-australia-methodology/aug-2020) for more information.

From August 2015, Labour Force Estimates have been compiled using population benchmarks based on the most recently available release of ERP data, continually revised on a quarterly basis.

To reduce the impact of seasonality on total employment, the estimates have been adjusted by factors based on seasonally adjusted LFS estimates. These factors were applied at the state and territory, sex, full-time and total employment levels, based on the seasonally adjusted LFS series as published in the August 2020 issue of [Labour Force, Australia \(https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/aug-2020\)](https://www.abs.gov.au/statistics/labour/employment-and-unemployment/labour-force-australia/aug-2020) (published 17/09/20). This adjustment accounts for August seasonality and irregular effects, resulting in an increase to the typically lower original employed estimates for August.

Imputation

Where information relating to earnings in both main job and/or second job was not provided by the respondent, values are imputed. Where this was the only information

missing from the respondent record, the value was imputed based on answers provided from another respondent with similar characteristics (referred to as the "donor"). Donor records were selected for imputation of earnings in main job by matching information on sex, age, state or territory of usual residence and selected labour force characteristics (full-time or part-time in main job, industry, occupation (and skill level), hours worked in main job, hourly rates, owner manager status) of the person with missing information.

Donor records were selected for imputation of earnings in second job by matching information on age, state or territory of usual residence, area of usual residence, owner manager status, hours worked in second job and frequency of pay in second job. Depending on which values were imputed, donors were chosen from the pool of individual records with complete information for the block of questions where the information was missing.

Prior to 2004, imputation was not used. Employees whose weekly earnings could not be determined were excluded from estimates of mean or median weekly earnings. Care should be taken when comparing earnings data from 2004 onwards with earnings data prior to 2004. To compare the change in methodology from 2003 to 2004 see paragraph 28 of the August 2004 [Employee Earnings, Benefits and Trade Union Membership](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6310.0Explanatory%20Notes1Aug%202004?OpenDocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6310.0Explanatory%20Notes1Aug%202004?OpenDocument>). (EEBTUM).

Comparability

Comparability with LFS

Due to differences in the scope and sample size of this supplementary survey and that of the monthly LFS, the estimation procedure may lead to some small variations between labour force estimates from this survey and those from the LFS.

Comparability with other earnings sources

Caution should be exercised when comparing estimates of earnings in this release with estimates of earnings in the biannual [Average Weekly Earnings](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6302.0>) and two-yearly [Employee Earnings and Hours](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6306.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6306.0>), which are compiled from employer based surveys. There are important differences in the scope, coverage and methodology of these surveys which can result in different estimates of earnings from each survey.

The survey of Average Weekly Earnings (AWE) collects information from employers who provide details of their employees' total gross earnings and their total number of employees (excluding amounts salary sacrificed). The survey of Employee Earnings and Hours (EEH)

collects information about weekly earnings and hours paid for, and the individual characteristics of a sample of employees within each selected employer unit. Both AWE and EEH are completed by employers with information from their payroll. However, for COE, respondents are either the employed person or another adult member of their household who responds on their behalf. Where earnings are not known exactly an estimate is reported. There are also scoping differences between both household and employer surveys. For example, AWE and EEH exclude employees in the Agriculture, forestry and fishing industry, and also employees of Private households, whereas these employees are included in the COE and EEBTUM surveys.

For further information on a number of earning series available from ABS sources, please refer to the [Income and Earnings fact sheet \(https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6102.0.55.001~Feb%202018~Main%20Features~5.%20Income%20and%20Earnings~51\)](https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by%20Subject/6102.0.55.001~Feb%202018~Main%20Features~5.%20Income%20and%20Earnings~51) in [Labour Statistics: Concepts, Sources and Methods \(https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/6102.0.55.001\)](https://www.abs.gov.au/ausstats/abs@.nsf/PrimaryMainFeatures/6102.0.55.001), or the spotlight article [Comparing average weekly earnings with other measures of earnings \(https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/average-weekly-earnings-australia/latest-release#spotlight-comparing-average-weekly-earnings-with-other-measures-of-earnings\)](https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/average-weekly-earnings-australia/latest-release#spotlight-comparing-average-weekly-earnings-with-other-measures-of-earnings) in [Average Weekly Earnings \(https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/average-weekly-earnings-australia/latest-release\)](https://www.abs.gov.au/statistics/labour/earnings-and-work-hours/average-weekly-earnings-australia/latest-release)

Survey output

Release strategy

From August 2020, statistics from the Characteristics of Employment survey are now published in three topic-based releases. See

- [Employee earnings \(https://author.absweb.aws.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings/latest-release\)](https://author.absweb.aws.abs.gov.au/statistics/labour/earnings-and-work-hours/employee-earnings/latest-release)
- [Working arrangements \(https://author.absweb.aws.abs.gov.au/statistics/labour/earnings-and-work-hours/working-arrangements/latest-release\)](https://author.absweb.aws.abs.gov.au/statistics/labour/earnings-and-work-hours/working-arrangements/latest-release)
- [Trade union membership \(https://author.absweb.aws.abs.gov.au/statistics/labour/earnings-and-work-hours/trade-union-membership/latest-release\)](https://author.absweb.aws.abs.gov.au/statistics/labour/earnings-and-work-hours/trade-union-membership/latest-release)

Characteristics of Employment data for 2014 to 2020 will be available in [TableBuilder \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6333.0.00.001Main+Features1August%202019\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6333.0.00.001Main+Features1August%202019) from 16 December 2020. TableBuilder enables the creation of customised tables and graphs.

Survey content

Characteristics of Employment contains data on mean and median weekly and hourly earnings, working time arrangements, working patterns, casual work, independent contracting, job flexibility, job stability, labour hire, locations of work and trade union membership, along with detailed socio-demographic and job characteristics.

Some data are only collected every two years, on an alternating basis, such as

- overwork, job flexibility, working patterns and locations of work.
- trade union membership, independent contractors and employment found through an employment agency or labour hire firm.

Characteristics of employment includes information on

- Socio-demographic characteristics - including sex; age; social marital status; relationship in household; state or territory of usual residence; and country of birth and elapsed years since arrival in Australia.
- Employment characteristics - including occupation; industry; hours worked; full-time or part-time status; sector; duration with current employer/business; whether worked on a fixed-term contract; and whether considered job to be casual.
- Employee earnings - including weekly and hourly earnings distributions; mean and median weekly earnings (in main, second and all jobs)
- Leave entitlements - paid sick leave; paid holiday leave; and paid maternity/paternity leave.
- Trade Union Membership - including trade union membership in main job; trade union member not necessarily in connection with main job; length of current trade union membership; whether previously a trade union member.
- Independent Contractors - Whether usually able to work on more than one active contract; whether had more than one contract for work in reference week; whether able to (sub) contract own work; main reason unable to (sub) contract own work; and whether had authority over own working procedures.
- Working patterns and arrangements - including whether usually work the same number of hours each week; whether guaranteed a minimum number of hours or work; whether pay varies ; whether usually works extra hours or overtime; whether required to be on-call or standby; whether usually worked shift work and type; working from home; whether had an agreement with employer to work flexible hours; whether preferred to work fewer hours; days of the week usually worked.
- People who found their job through a labour hire firm/employment agency - Whether currently registered or had registered in the last 12 months; whether found a job; and whether paid by a labour hire firm/employment agency.

Previous surveys

Earnings and benefits

Similar surveys on weekly earnings have been conducted annually in August since 1975,

except in 1991 when the survey was conducted in July, and in 1996 when the survey was not conducted. Prior to the commencement of Characteristics of Employment in 2014, weekly earnings and employment benefits were published in [Employee Earnings, Benefits and Trade Union Membership, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0) (known as [Weekly Earnings of Employees \(Distribution\), Australia \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6B722DD2653E5B3ACA2570AC007C3CEC?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6B722DD2653E5B3ACA2570AC007C3CEC?opendocument) prior to 1999).

Prior to 1997, information on employment benefits (such as leave entitlements) have been published in

- [Employment Benefits, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6334.0.40.001\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6334.0.40.001), Aug 1994 (cat. no. 6334.0.40.001)
- [Employment Benefits, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6334.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6334.0), 1979-1992 (cat. no. 6334.0).

Information on the use of leave entitlements was previously published in [Annual and Long Service Leave Taken, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6317.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6317.0), 1974-1989 (cat. 6317.0). Information on the use of paid sick leave was last published in [Working Arrangements, Australia \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7FBCC870780B923FCA2572E9001830F8?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7FBCC870780B923FCA2572E9001830F8?opendocument), Nov 2003 (cat. no. 6342.0).

Trade union membership

Information on trade union membership was first collected in a supplementary survey in 1976, again in 1982, then biennially in its current format from 1986 to 1990. Between 1992 and 2013, it was conducted annually (with only limited data available every second year). Prior to Characteristics of Employment, results of previous surveys were published in [Employee Earnings, Benefits and Trade Union Membership, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6310.0) and before that in [Trade Union Members, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6325.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6325.0).

Limited data on trade union membership have also been published in

- [Employment Arrangements, Retirement and Superannuation, Australia, April to July 2007 \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6361.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6361.0)
- [Weekly Earnings of Employees \(Distribution\), Australia, August 1997 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F7C040393C2C15DCCA2570AC007C3CE9?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F7C040393C2C15DCCA2570AC007C3CE9?opendocument)
- [Working Arrangements, Australia, November 2003 \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7FBCC870780B923FCA2572E9001830F8?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7FBCC870780B923FCA2572E9001830F8?opendocument).

Information on trade union membership provided from an annual census of trade unions is available in the following reports between 1891 and 1996

- [Labour and Industrial Branch Report \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6AC0579ED3DA1118CA2574BA001FDC52?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/6AC0579ED3DA1118CA2574BA001FDC52?opendocument), 1891-1912 (cat. no. 6101.0)
- [Labour and Industrial Branch Report \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/02B309E79ABBC42ECA2574AD001B6A7E?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/02B309E79ABBC42ECA2574AD001B6A7E?opendocument), 1911-1921 (cat. no. 6101.0)
- [Labour Report \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/84879F4A2B83746DCA2574910000E2F5?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/84879F4A2B83746DCA2574910000E2F5?opendocument), 1922-1973 (cat. no. 6101.0)
- [Labour Statistics \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/70A9A6519B564400CA2574900080C001?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/70A9A6519B564400CA2574900080C001?opendocument), 1975-1978 (cat. no. 6101.0)
- [Labour Statistics, Australia \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/MF/6101.0\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/MF/6101.0), 1979-1997 (cat. no. 6101.0)
- [Trade Union Statistics, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6323.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6323.0), 1969-1996 (cat. no. 6323.0).

Working arrangements

Information on working arrangement and forms of employment was originally collected every 3 years between 1998 and 2004, followed by surveys in 2006 and 2007. In 2008, the survey was redeveloped to better capture information of independent contractors, and was collected annually on this basis until 2013. Results of previous surveys were published in [Forms of Employment, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6359.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6359.0).

Information on Working Arrangements has been collected in a variety of surveys since 1976, as follows

- [Work Patterns of Employees \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6328.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6328.0), Nov 1976 (cat. no. 6328.0)
- [Evening and Night Work \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6329.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6329.0), Nov 1976 (cat. no. 6329.0)
- [Working Conditions, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6335.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6335.0), Feb-May 1979 (cat. no. 6329.0)
- [Working Hours Arrangements, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6338.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6338.0), Feb-May 1981 (cat. no. 6338.0)
- [Working Hours Arrangements - Supplementary Tables, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6339.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6339.0), Feb-May 1981 (cat. no. 6339.0)
- [Alternative Working Arrangements, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6341.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6341.0), 1982-1986 (cat. no. 6341.0)
- [Working Arrangements, Australia \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7FBCC870780B923FCA2572E9001830F8?opendocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/7FBCC870780B923FCA2572E9001830F8?opendocument), 1993-2003 (cat. no. 6342.0)
- [Working Time Arrangements, Australia \(https://www.abs.gov.au/ausstats/abs@.nsf\)](https://www.abs.gov.au/ausstats/abs@.nsf)

[/mf/6342.0](#)), 2006-2012 (cat. no. 6342.0).

Information on employment through a labour hire firm or employment agency was first collected in the 2008 issue of [Forms of Employment, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6359.0>) and again in November 2011.

Information on Working from home has been collected irregularly between 1989 and 2008 in [Locations of Work, Australia](#) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/6275.0>) (known as Persons Employed at Home, Australia prior to 2000).

Accuracy and quality

Reliability of estimates

As the estimates are based on information obtained from occupants of a sample of households, they are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all households had been included in the survey or a different sample was selected. Two types of error are possible in an estimate based on a sample survey - sampling error and non-sampling error.

- sampling error is the difference between the published estimate and the value that would have been produced if all dwellings had been included in the survey.
- non-sampling errors are inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration, whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and effective processing procedures.

Some of the estimates contained in the tables have a relative standard error (RSE) of 50 per cent or greater. These estimates are marked as unreliable for general use. Estimates with an RSE of between 25 and 50 per cent are also marked and should be used with caution.

More on reliability of estimates

Non-sampling error

Non-sampling error may occur in any collection, whether it is based on a sample or a full count such as a census. Sources of non-sampling error include non-response, errors in reporting by respondents or recording of answers by interviewers and errors in coding and processing data. Every effort is made to reduce non-sampling error by careful design and testing of questionnaires, training and supervision of interviewers, and extensive editing and quality control procedures at all stages of data processing.

Sampling error

Sampling error is the difference between the published estimates, derived from a sample of persons, and the value that would have been produced if the total population (as defined by the scope of the survey) had been included in the survey. One measure of the sampling error is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of persons was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all households had been surveyed, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate.

$$RSE\% = \left(\frac{SE}{estimate} \right) \times 100$$

RSEs for estimates have been calculated using the Jackknife method of variance estimation. This involves the calculation of 30 'replicate' estimates based on 30 different sub-samples of the obtained sample. The variability of estimates obtained from these subsamples is used to estimate the sample variability surrounding the main estimate. RSEs for median estimates have been calculated using the Woodruff method.

The Excel spreadsheets in the Data downloads section contain all the tables produced for this release and the calculated RSEs for each of the estimates.

Only estimates (numbers or percentages) with RSEs less than 25% are considered sufficiently reliable for most analytical purposes. However, estimates with larger RSEs have been included. Estimates with an RSE in the range 25% to 50% should be used with caution while estimates with RSEs greater than 50% are considered too unreliable for general use. All cells in the Excel spreadsheets with RSEs greater than 25% contain a comment indicating the size of the RSE. These cells can be identified by a red indicator in the corner of the cell. The comment appears when the mouse pointer hovers over the cell.

Another measure is the Margin of Error (MOE), which shows the largest possible difference that could be between the estimate due to sampling error and what would have been produced had all persons been included in the survey with a given level of confidence. It is useful for understanding and comparing the accuracy of proportion estimates.

Where provided, MOEs for estimates are calculated at the 95% confidence level. At this level, there are 19 chances in 20 that the estimate will differ from the population value by less than the provided MOE. The 95% MOE is obtained by multiplying the SE by 1.96.

$$MOE = SE \times 1.96$$

Calculation of standard error

Standard errors can be calculated using the estimates (counts or percentages) and the corresponding RSEs. Since the RSE is obtained by expressing the standard error as a percentage of the estimate, recalculating the standard error is obtained by multiplying the estimate by the RSE.

Proportions and percentages

Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when x is a subset of y

$$RSE(\frac{x}{y}) \approx \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

Differences

The difference between two survey estimates (counts or percentages) can also be calculated from published estimates. Such an estimate is also subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula

$$SE(x - y) \approx \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

While this formula will only be exact for differences between separate and uncorrelated characteristics or sub populations, it provides a good approximation for the differences likely to be of interest in this publication.

Significance testing

A statistical significance test for a comparison between estimates can be performed to determine whether it is likely that there is a difference between the corresponding population characteristics. The SE of the difference between two corresponding estimates (x and y) can be calculated using the formula shown above in the Differences section. This SE is then used to calculate the following test statistic

$$\left(\frac{x-y}{SE(x-y)} \right)$$

If the value of this test statistic is greater than 1.96 then there is evidence, with a 95% level of confidence, of a statistically significant difference in the two populations with respect to that characteristic. Otherwise, it cannot be stated with confidence that there is a real difference between the populations with respect to that characteristic.

Rounding

As estimates have been rounded, discrepancies may occur between sums of the component items and totals.

Standards and classifications

- Country of birth data are classified according to the [Standard Australian Classification of Countries \(SACC\), 2011](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F63BD8670E4CF23CCA257FDC0011DB93?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/F63BD8670E4CF23CCA257FDC0011DB93?opendocument>)
- Occupation data, including skill level of main job, are classified according to [ANZSCO - Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0>)
- Industry data are classified according to the [Australian and New Zealand Standard Industrial Classification \(ANZSIC\), 2006 \(Revision 2.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0>)
- Education data are classified according to the [Australian Standard Classification of Education \(ASCED\), 2001](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0>)
- Geography data are classified according to the [Australian Statistical Geography Standard \(ASGS\), 201](https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/9593E06A9325683BCA257FED001561EA?opendocument) (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/9593E06A9325683BCA257FED001561EA?opendocument>) 6 (<https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/871A7FF33DF471FBCA257801000DCD5F?opendocument>)

Glossary

Show all

Agreement to work flexible hours

An agreement that is either in writing or otherwise. A written agreement can be in the form of, but not limited to, an individual written agreement between an employer and employee, or a Collective Agreement or Certified Agreement (CA) made directly between an employer and a group of employees.

Born in Australia

Includes people born in Australia, Norfolk Island and Australian External Territories.

Continuous duration with current employer/business

The length of the current period of employment people had with their employer or in their own business. The length of time includes periods of paid leave, unpaid leave or strike.

Did not draw a wage or salary

Consists of people who worked in their own incorporated enterprise only i.e. Owner managers of incorporated enterprises (OMIEs).

Employed

People aged 15 years and over who, during the reference week

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (comprising employees, employers and own account workers), or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers), or
- were employees who had a job but were not at work and were
 - away from work for less than four weeks up to the end of the reference week
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four week period to the end of the reference week
 - away from work as a standard work or shift arrangement
 - on strike or locked out
 - on workers' compensation and expected to return to their job, or
- were employers or own account workers who had a job, business or farm, but were not at work.

Contributing family workers in their main job were excluded from the Characteristics of Employment Survey.

Employees

Employees are people who

- worked for a public or private employer, and
- received remuneration in wages or salary; or are paid a retainer fee by their employer or worked on a commission basis, for tips, piece-rates or payment in kind.

Employment agency

An employment agency is an organisation which is engaged in personnel search, or selection and placement of people for an employing organisation. The agency or firm may also be engaged in supply of their own employees to other employers, usually on a short-term basis. (See also labour hire firm).

Fixed-term contract

A contract of employment which specifies that the employment will be terminated on a particular date/event.

Full-time workers in main job

People who were employees and usually work 35 hours or more a week in their main job, or usually work fewer than 35 hours but worked 35 hours or more in their main job during the reference week.

Full-time workers

Employed people who usually worked 35 hours or more a week (in all jobs) and others who, although usually worked less than 35 hours a week, worked 35 hours or more during the reference week. These people were classified as full-time workers.

Holiday leave

The entitlement of an employee to paid holiday, paid vacation or paid recreation leave in their main job.

Hours paid for in main job

The number of hours for which employees and OMIEs were paid in their main job in their last pay, not necessarily the number of hours actually worked during the reference week (e.g. a person on paid leave for the week was asked to report the number of hours for which they were paid).

Hours usually worked

The number of hours usually worked in a week.

Hours worked

The number of hours actually worked during the reference week.

Independent contractors

Independent contractors are people who operate their own business and who are contracted to perform services for others without having the legal status of an employee, i.e. people who are engaged by a client, rather than an employer to undertake the work. Independent contractors are engaged under a contract for services (a commercial contract), whereas employees are engaged under a contract of service (an employment contract).

Independent contractors' employment may take a variety of forms, for example, they may have a direct relationship with a client or work through an intermediary. Independent

contractors may have employees, however they spend most of their time directly engaged with clients or on client tasks, rather than managing their staff.

Industry

An industry is a group of businesses or organisations that undertake similar economic activities to produce goods and/or services. In this publication, industry refers to ANZSIC Division as classified according to the [Australian and New Zealand Standard Industrial Classification \(ANZSIC\), 2006 \(Revision 2.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1292.0>).

Labour hire firm

A labour hire firm is an organisation which is engaged in personnel search, or selection and placement of people for an employing organisation. The agency or firm may also be engaged in supply of their own employees to other employers, usually on a short-term basis. (See also employment agency).

Labour hire workers

Labour hire workers are people who found their job through a labour hire firm/employment agency and are paid by the labour hire firm/employment agency.

Level of highest educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken. It is categorised according to the [Australian Standard Classification of Education, 2001](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0>).

Level of highest non-school qualification

A person's level of highest non-school qualification is the highest qualification a person has attained in any area of formal study other than school study. It is categorised according to the [Australian Standard Classification of Education, 2001](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1272.0>).

Main job

The job in which the most hours were usually worked.

Maternity/paternity leave

The provision by an employer of paid maternity/paternity leave.

Mean weekly earnings

The amount obtained by dividing the total earnings of a group by the number of people in that group.

Median weekly earnings

The amount which divides the distribution into two groups of equal size, one having earnings above and the other below that amount.

Multiple jobholder

Employed people who, during the reference week, worked in more than one job. Multiple jobholders exclude those who changed employer during the reference week. People who were unpaid voluntary workers or on unpaid trainee/work placement in their second job were excluded from the Multiple jobholder population.

Information on earnings in main job is collected from all multiple jobholders. Information on earnings in second job is only collected from multiple jobholders who were employees or OMIEs in their second job and were an employee or OMIEs in their main job.

Occupation

An occupation is a collection of jobs that are sufficiently similar in their title and tasks, skill level and skill specialisation which are grouped together for the purposes of classification. In this publication, occupation refers to Major Group and Skill Level as defined by [ANZSCO - Australian and New Zealand Standard Classification of Occupations, 2013, Version 1.2](https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0) (<https://www.abs.gov.au/ausstats/abs@.nsf/mf/1220.0>).

On call

A shift arrangement, for being available, when not at work, to be contacted to resume work. An allowance may be paid to the employee for being on call.

Overtime

Work undertaken which is outside, or in addition to, ordinary working hours in main job, whether paid or unpaid.

Owner managers of incorporated enterprises (OMIEs)

People who work in their own incorporated enterprise, that is, a business entity which is registered as a separate legal entity to its members or owners (may also be known as a limited liability company). An owner manager of an incorporated enterprise may or may not hire one or more employees in addition to themselves and/or other owners of that business. See Status of Employment for more information.

Owner managers of unincorporated enterprises (OMUEs)

A person who operates his or her own unincorporated enterprise or engages independently in a profession or trade. An owner manager of an unincorporated enterprise may or may not hire one or more employees in addition to themselves and/or other owners of that business. See Status of Employment for more information.

Paid leave entitlements

The entitlement of employees to paid holiday leave or paid sick leave (or both) in their main job.

Part-time workers in main job

People who were employees and usually work fewer than 35 hours a week in their main job, and did so in the reference week.

Part-time workers

Employed people who usually worked fewer than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work in the reference week.

Reference week

The week preceding the week in which the interview was conducted.

Second job

A job, other than the main job.

Sector of main job

Sector of main job is used to classify a respondent's employer as a public or private enterprise. The public sector includes all government units, such as government departments, non-market non-profit institutions that are controlled and mainly financed by government, and corporations and quasi-corporations that are controlled by government.

Shift work

A system of working whereby the daily hours of operation at the place of employment are split into at least two set work periods (shifts) for different groups of workers. Types of shifts include

- Irregular shifts - Describes shifts that do not follow a set pattern
- Regular shifts - Shifts worked to a set pattern of times. Regular shift times are presented as follows
 - morning shifts - between 6.00am and 12.00pm

- afternoon shifts - between 12.00pm and 5.00pm, and
- evening, night or graveyard shift - between 5.00pm and 6.00am.
- Rotating shift - A shift arrangement, in which the shift worked changes periodically from one time period to another, for example from mornings or afternoons to evenings or nights.
- Split shift - Occurs when the worked period is broken by an extended unpaid 'free' period, thereby constituting an extended working day consisting of two (or more) shifts.

Sick leave

The entitlement of an employee to paid sick leave in their main job.

Standby

People who are usually waiting to restart work or people who have had to restart work after being recalled, without additional pay and allowances.

Status of employment

Status of employment is determined by an employed person's position in relation to their job, and is in respect of a person's main job if they hold more than one job. Employed people are classified according to the reported relationship between the person and the enterprise for which they work, together with the legal status of the enterprise where this can be established. The groups include

- Employees
- Owner Managers of Incorporated Enterprises (OMIEs)
 - OMIEs with employees
 - OMIEs without employees
- Owner Managers of Unincorporated Enterprises (OMUEs)
 - OMUEs with employees
 - OMUEs without employees, and
- Contributing family workers.

Trade union

An organisation consisting predominantly of employees, the principal activities of which include the negotiation of rates of pay and conditions of employment for its members.

Trade union member

Employed people with membership in a trade union in connection with their main job.

Weekly earnings

Amount of 'last total pay' (i.e. before taxation, salary sacrifice and other deductions had

been made) from wage and salary jobs prior to the interview. For people paid other than weekly, earnings were converted to a weekly equivalent. No adjustment was made for any back payment of wage increases, prepayment of leave or bonuses, etc.

With paid leave entitlements

Employees who were entitled to paid holiday leave or paid sick leave (or both) in their main job.

Without paid leave entitlements

Employees who were not entitled to paid holiday leave and paid sick leave, or did not know whether they were entitled to paid holiday leave or paid sick leave in their main job.

History of changes

The ABS has been conducting the Characteristics of Employment Survey, or its predecessors, since 1975. While seeking to provide a high degree of consistency and comparability over time by minimising changes to the survey, sound survey practice requires careful and continuing maintenance and development to maintain the integrity of the data and the efficiency of the collection.

The changes which have been made to Characteristics of Employment, its predecessors and the monthly LFS have included changes in sampling methods, estimation methods, concepts, data item definitions, classifications, and time series analysis techniques.

Show all changes

Aug 2020

- Characteristics of Employment split into three releases: Employee earnings, Working arrangements, and Trade union membership.
- Suspension of trend estimates and change to the use of forward factors for seasonally adjusted estimates as a result of COVID-19.
- Table 14 added which consolidates all the Trade Union Membership data into one table.

Aug 2019

- A review of the imputation methodology used for earnings data highlighted quality gains from making further improvements in the quality checking of reported data prior to imputation. These improvements have been implemented and applied to the 2014-2018 period, resulting in revisions. The refinements resulted in negligible revisions to headline median time series, while the revisions to mean time series data have noticeably improved their coherence with other ABS earnings measures, particularly for male

earnings.

Aug 2017

- The headline figures changed from a focus on mean earnings to a focus on median earnings.
- Hourly earnings were introduced as a derived measure based on weekly earnings and weekly hours paid for.
- Regular rebenchmarking was introduced to reflect the latest revisions to ERP data.
- Trend factor adjustment was introduced to reduce the impact of seasonal and irregular effects on total employment, based on trend Labour Force Survey (LFS) estimates.
- Estimates based on Skill level of main job was introduced. Under ANZSCO, every occupation is assigned a skill level from 1 (high-skilled) to 5 (low-skilled) based on the range and complexity of the particular set of tasks performed in that job.
- Improvements were made to the imputation and outlier process for earnings data, relating to the addition of skill level of main job and hourly earnings information into the process. These improvements have been applied to the period 2014-2017 resulting in revisions over this period.
- Data linking of characteristics between EEBTUM in August with FOES in November or SEW in May was introduced for revised estimates prior to 2014. These were subject to different seasonal impacts, which may result in an observable break in series between the historical data and data collected in COE. Trend factors have also been applied to these historical estimates to reduce the impact of seasonality on total employment estimates.
- Estimates for periods 2004 to 2014 were revised to reflect new definition of employee. See Appendix: [Status of employment and population concordance](https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/6333.0Appendix2August%202014#ENLink) (<https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/6333.0Appendix2August%202014#ENLink>) for more information. Estimates were also revised to match the latest ASGS Geography (Capital City and Balance of State), ANZSIC Industry and ANZSCO Occupation classifications.

Aug 2014

- Characteristics of Employment survey combines and replaces the Employee Earnings, Benefits and Trade Union Membership, Forms of Employment and Working Time Arrangements surveys.
- From August 2014 onwards, employees exclude Owner Managers of Incorporated Enterprises (OMIEs). Prior to July 2014 (including in the Labour Force Survey and other household surveys) employees included OMIEs.
- From August 2014 collection of earnings in second job was changed to match the collection of earnings in main job. Previously, earnings in second job was collected from respondents who were employees in their second job who actually worked some hours in their second job in the reference week. Earnings were reported for those hours actually worked in that job. From 2014, earnings in second job were collected from employees in their second job regardless of whether they worked in that job in the reference week. Earnings data and frequency of pay in that second job were subsequently collected. This change resulted in a break in series of earnings in all jobs

and earnings in second job. Caution should be exercised when comparing second and all job earnings data from COE with previous years.

- From August 2014 onwards, information about trade union membership is collected from all employed people. This was previously only collected of employees.

Aug 2007

- From 2007, earnings specifically include amounts salary sacrifice. In previous years, there was no explicit reference to the treatment of salary sacrifice however It is probable that some employees were already including amounts of salary sacrifice in their estimates of earnings, depending upon how their pay was reported. This change has resulted in a break in series. See [Information paper: Changes to ABS Measure of Employee Remuneration, Australia 2006 \(https://www.abs.gov.au/ausstats/abs@.nsf/mf/6313.0\)](https://www.abs.gov.au/ausstats/abs@.nsf/mf/6313.0).

Aug 2004

- Earnings for employees whose weekly earnings could not be determined are now imputed. Prior to 2004 these were excluded from estimates of mean or median weekly earnings. Care should be taken when comparing earnings data from 2004 onwards with earnings data prior to 2004. To compare the change in methodology from 2003 to 2004 see the August 2004 [Employee Earnings, Benefits and Trade Union Membership \(https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6310.0Explanatory%20Notes1Aug%202004?OpenDocument\)](https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/6310.0Explanatory%20Notes1Aug%202004?OpenDocument).